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### Hand Held Lava

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## Hand Held Lava

by Ilana Halperin, Karen Holmberg and Andrew Patrizio

Delivered on 8<sup>th</sup> Oct 2010, Triple Canopy, Brooklyn, NY

[KAREN]

### The volcano inside

*Passion, promiscuity, sensuousness, synaesthesia*; denotatively these words cling to the slopes of a volcano.

She fell in love with an extinct volcano.

Thus spoke <sup>1</sup> Anais Nin (1959: 10), weaver of erotica and probing personal introspection. Nin's volcano was, sadly for her, cold. cadaverous.

Ask for red wine at Lakones and they will bring you a glass of volcano's blood

- Lawrence Durrell (1957: 17), immortalizer of love in beautiful places and ugly times. For him, the volcano throbbed with animation.<sup>2</sup>

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<sup>1</sup> *Thus Spoke Zarathustra*, by Nietzsche, was conceptualized at the same time that he was writing *The Gay Science*; both contain the famous dictum 'God is dead'. The inspiration for it came at the sight of a towering, pyramidal rock.

<sup>2</sup> Another 'volcano blood' reference can be found in *Autobiography of Red* (Carson 1998: 59): "I am molten matter returned from the core of the earth to tell you interior things - /Look! he would prick his thumb and press out ocher-colored drops that sizzled when they hit the plate - Volcano blood!"

Spreading a living skin upon a geophysical entity is a metaphor with restless analogy; mesh upon a model described as having lips, fingers, toes, a neck, veins, youth, dotage, death.

For those of us drawn to the volcano [while infected with the high post-modern condition] our minds and bodies share an overlapping elected genealogy. It is a visceral relationship with a conceptual sublimeness.<sup>3</sup> The intellectual ancestors are a colorful assortment, all tottering at the edge of their personal craters:

I should start with Pliny the Elder, engaging his scientific curiosity but exchanging it for his mortal life under Vesuvius two millennia ago. I'll name him patriarch.

As great uncle I'll take Athanasius Kircher (2005 [1678]): inventor of a vomiting mechanical lobster and a *Katzenklavier*; filled with properly tuned cats and spikes, it lost the Renaissance popularity contest with the more humane harpsichord. In 1638 he had himself lowered into Vesuvius as it simmered in pre-eruption jitters to study its maw more personally.

Fast forward: 138 years. Diplomat, famous cuckold of a inconstant beauty with a one-armed man, early volcanologist: William Hamilton assiduously observed, compulsively climbed, and meticulously monitored that same sentinel over Naples, Vesuvius. He produced a financially crippling and aesthetically astounding compilation of observations of Pompeii's pillager in text and image (Hamilton 1776). He could be a favorite uncle.

Madame de Staël must be stirred into the stemma. Coquette, prone to over-excitement and over-study, and gatekeeper to the most celebrated salons in Paris; she wrote of free love and the possibility of female genius if only societal

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<sup>3</sup> Burkian, Kantian, and all other flavors of sublime one can name.

corsets were lightly loosened. Novelty in novel form, she introduced the new modern fact of Pompeii's existence, so freshly discovered in her lifetime;

'death's abrupt invasion' in material proof at the frozen city and at the doorstep of the Romantic period (de Stael 1998 [1805]: 198). She trumped Charles Dickens (1846) by four decades in describing the 'Destroyer and Destroyed' and is my choice for admired aunt. I can say the same of Emily Dickinson, who wrote of the reticent volcano as metaphor for female sexuality.

Alexander von Humboldt, the accusations of buggery that dogged your peripatetic path seem below the belt and overshadowed by your brilliance and I would happily call you godfather. Through the volcano, you proclaimed, we are privy to the unexpectedly 'intimate connection between so many diverse phenomena' in the 'stupendous display of wild and gigantic nature' (Humboldt 1831: 1-4). Those you inspired found 'each one a noble spectacle' without compare (Stephens and Catherwood 1969 [1841]). You prompted Charles Darwin (1851: ii) to wax poetically, volcanically, for a revolution in scientific instruction to open itself to the magic of physical geology .<sup>4</sup>

My imaginative family tree now traced up to the century that preceded our new, wobbly-legged, *liquor amnii* <sup>5</sup>-wet millennium I'll make space for Sigmund Freud (1917), who found archaeology and the eruption of a volcano a potent combination and their conjunction at Pompeii precisely what the doctor ordered; there is no more tangible way to explain repression and subconscious. I choose Susan Sontag, scribe of *The Volcano Lover* (Sontag 1993), and the unconventional fire of Anne Carson's poetry in *Autobiography of Red* (Carson

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<sup>4</sup> Charles Darwin, an avid reader of Humboldt, bemoaned his 'incredibly dull' geology professor (Prof. Jameson) and proposed that 'Geologising in a volcanic country is most delightful; besides the interest attached to itself, it leads you into most beautiful and retired spots' (Darwin 1851: ii).

<sup>5</sup> Amniotic fluid

1998) where a winged monster-boy Geryon wanders in his volcanic soul and finds love with handsome Herakles, to round out my volcanic family. It would be hubris to call you sisters, so instead I name you cherished family advisors, bellwethers and rallying sirens.

I bind you up into myself, my eccentric family, and the genealogical tree with its distinct branches becomes instead a basket of woven rhizomes in order to fit within the space of my mind. My professional scientific trajectory entwines my personal imaginative world, which is impregnated by the writing and perception of so many others.

*Passion, promiscuity, sensuousness, synaesthesia....* They are all linked in the volcano. The intensity of the volcano lending it passion whenever viewed physically or metaphorically; promiscuity – the disregard of boundaries - entailed in the heady sense that the living and geophysical are bound into a single matrix and cannot be separated; sensuousness – that which we perceive – conflating with sensuality and bleeding into a synaesthesia in which we see, hear, taste, smell, feel the volcano in ways that our images – still, moving, or verbal - struggle to portray.

**[ANDREW]**

**Cold Lava: Vesuvius 1944**

Family tradition paints my maternal grandfather as unlucky. A science fiction author who published regularly but never made it to the heights of some of his close friends.

I've recently discovered yet another example of his ability to be just off on his timing.

I have a small test tube filled with ash from the 1944 eruption of Vesuvius scooped up by my grandfather, there as a member of the British 8<sup>th</sup> Army at the time. Vesuvius's last major eruption occurred between March 18-23, of that year, 1944.

We'll come to what my grandfather recorded of his visit in a moment. Meanwhile, here's what is recorded by Americans who happened to be based in the vicinity, at the mid-west point of the Italian peninsula.

Dana Craig from the 486th Bombardment Squadron of the 340th Bombardment Group:

"... Vesuvius was belching smoke. It was an overcast sky with the threat of rain....

While outside, in a mild drizzle, I was hit on the head by what I thought was a small rock. Suspecting some sort of joke, I went inside for a flashlight. When I returned, the light revealed a layer of damp cinders on the ground. We knew at

that time that Vesuvius was erupting. We began to feel the earth shake as though a bomb had gone off. After each quake, a few minutes would pass before the debris blown out of the crater would start to hit the ground. About daylight, the rear of our building started to cave in. We then began to see the larger rocks coming down.'

P-39 Airacobra fighter pilot, Joseph P. Gomer, of the 301st fighter squadron/332nd fighter group, described the volcano after leaving his base at Salerno:

"I remember taking off that day and swinging over the coast. I could see all that red lava just flowing down. A beautiful sight."

From the diary of Dr. Leander K. Powers, here are four entries made between March 17 and 22:

### **Saturday, March 17, 1944**

"While we were just finishing supper, someone called to say there were huge red streams of lava flowing down the sides of Mount Vesuvius. It was a sight to behold. Never had we seen such at night — usually a faint red glow at the most. As we watched the streams, like giant fingers flowing down the sides, we could see a glow in the sky. All during the night and Sunday there were quakes of the earth with tremendous roars - similar to thunder - from Vesuvius. The windows rattled, and the entire building vibrated."

### **Sunday, March 18, 1944**

"Streams of fire were shooting thousands of feet into the air, and the countryside was lit up for miles around. Oft times the entire top of the mountain looked as if it were a blazing inferno."

### **Monday, March 19, 1944**

"I learned that a stream of lava was flowing down the side toward Naples, so we rode over to see it. It was the most phenomenal thing I have ever witnessed. A huge mass of fiery coals some 20 feet high and 200 yards wide destroying everything in its path."

### **Thursday, March 22, 1944**

"Thursday morning, we rode down beyond Pompeii. The cinders were so deep that traffic was stopped. Along about noon, the wind changed and the cinders began falling on Torre Annunziato. Everything had a coat of black, just like light snow. We rode up toward the Naples side on the Autostrade, and, as the wind was blowing toward town, I got a wonderful view of the boiling inferno."

My grandfather, who grew up obsessed with the novels of Jules Verne and H G Wells and a budding writer with the manuscript of his first novel in his back-pack, moved into Naples only 44 days later. On 19<sup>th</sup> May, after seeing a performance of *Tosca* at the San Carlo Opera House in Naples, he records:



“Back passed Vesuvius and Pompeii, cold, sunless weather & depressing.”

Is that all he saw in May 1944, when Vesuvius was pausing for breath? How unlucky is that?

The sharp melancholia of being just too late. Of being on the cool periphery where all that was possible to do was to shovel a small pocketful of volcanic ash and lock it within a glass test tube. That tube, brought home and passed now to my mother, with its burnt sienna wax seal still intact, cotton wool holding down this narrative core sample of fine and lumpy granules, sits next to me now, in Edinburgh. Two labels along its flank read ‘MOUNT VESUVIUS ITALY’ and ‘VOLCANIC ASH’.

Maybe the Vesuvian tube is less kitschy and commercial than a lava medallion pressed by locals at the edge of the lava stream for the tourist trade; yet it has followed a near identical trajectory, from the guts of the earth, into air and, then to ground, gathered for the mantelpiece in a foreign land to become a memento for a loved one back at home, then as a memento again of the person who created it in the first place; my grandfather.

We try to make the past into an event through creating small objects for the hand and the eye - framed by a test tube or a camera lens; kept in a sunless drawer or uploaded onto YouTube for the world.

But remember, the lava is in its death throes by the time we watch it. A living event for us is a dying event for the burning material expiring at our feet. Its life was prior, in the hidden earth. Now all we see and hear is an object set somewhere between a breath and a wound.

[ILANA]

FIELD DIARY: HAWAII

Last night I woke up in the middle of the night in a panic. We came to this island to spend time with the volcano. Once here, you are 2,500 miles from land in any direction you look. There are no short cuts to get home. Antarctica is closer to other landmass than this volcanic chain. We are next to an erupting volcano. We are sleeping in a place seven miles from the point where lava enters the ocean. The current eruption has been going since 1984. The perpetual creation of new landmass.

In the afternoon we went for a drive, down towards the water for the first time. We wanted to see what happened when we hit the end of land. To our right in the distance two huge plumes of smoke came up from the ground into the sky. Volcanic plumes where lava goes into the ocean – the lava ocean entry points. My body shuddered for the first time, upon realizing that always, always our companions would be these two plumes of smoke, this constant volcano.

At the shore, pitch black lava fields, and as soon as you step onto the flows – the burnt out cast of a fruit. Dappled, pock marked into the ground, a 3/4 globe – the

opposite of Pompeii. No positive cast – only negative space, like the Hiroshima shadows on the walls – absence of the body, only the after image etched onto a surface. We are on an erupting volcano in the middle of the ocean. But this is not a useful way to think. We have only just arrived.

The amount of lava that comes out of the Kilauea volcano could pave a road to the moon and back again five times a day every single day. At the crater's edge is Volcano House, a meeting point for volcano lovers since 1865. For 90 years, Volcano House held a register, where visitors were asked to describe exactly what they saw the volcano doing when they were standing at the crater's edge. Say you were the only visitor one day and witnessed an unusual lava fountain. Your chronicle of events might be the only record of this moment in the volcano's life. Thus, a 90 year long daily history or - a volcanic diary changing hands each entry, was constructed. A communal biography of a volcano. A geologic life told through hundreds of personal encounters. This reminds me of a conversation I had with a volcanologist about volcanology as a science. Ultimately, a volcano's life is much longer than yours or mine, so to learn about a volcano, study it, get to know it, you must accept that you may never see its full range of behaviors firsthand. A calm volcano might have a violent eruption 400 years from the day you first meet, and even multi-generations of volcanologists may still only cover 300 years in the long life of an active mountain. So inbuilt into the process is the tradition of passing along everything you know about your volcano to the next volcanologist who will be there when you are gone. Inbuilt into the story of each person who gets to know a volcano is the story of that same person's obsolescence. A volcano perpetually erases its own history.

## LAVA ENCOUNTERS

Sometimes you get the feeling the island with its two plumes of smoke coming out of each nostril, will decide to heave itself up and thrash around.

On the road, you see lava, like a lumbering animal, an early organic life form made of mounds of porridge (or the instant pudding that inflates in Sleeper) dragging itself down the middle of the street, paralyzed part way through the journey.

Today, we drove up to the summit of the volcano. We stopped at a vast expansive lava flow that formed in 1985. As we walked out onto the flow, actually it was quite frightening. You really have the feeling that the lava is an organism, as opposed to geology. The way the crust forms over these tubular flows is almost like reptilian skin, and then it is like a mosaic because it is broken in such an even pattern. Where it is completely smooth, it looks like starfish tentacles or a little bit like the roots of the Fossil Grove in Glasgow – all those drowned petrified tree stumps...which again, are almost like an animated geology – or an organism geology. Certain areas look like a series of details from renaissance paintings with heavy Italianate red velvet drapery. They are sheets of lava, folded in on themselves. There are sections of braided lava, long and ornate like a majestic set of cornrows for the volcano. In the Visitor Centre hangs a famous painting of Pele, her hair in long twisting coils which descend into rivers of lava surrounding her feet, becoming channels of molten rock.

Some sections look like the most intricate woven ropes used aboard ancient fishing vessels, so delicate, they look handspun. Sometimes it is very hard to believe it was all made through a naturally occurring process.

## THE BOAT

We joined a boat heading out to the lava entry ocean points, to see the process of new landmass forming from the water line. We climbed aboard the boat while still onshore. It was driven down to the slip, huge concrete breakers lining the ramp the whole way down in interlocking structures reminiscent of 1970s civic sculpture - modernist and severe. A truck reversed down the slip. From a height the boat was dropped into the water. Night swells still rolling in at 5:00am the boat slammed into each wave as if hitting a brick wall. Every wave to arrive at this island has traveled thousands of miles across the ocean to get here. The impact was full force, ribs sore from smashing into the fiberglass lip of the vessel. It was a struggle to leave the shore. Picking up speed in the open water, the Denmark Strait was gentle in comparison. Far in the distance, with slight sun rising, the plumes. And then, with distance changing velocity, we were almost in the flow.

A soup pot from Hephaestus, a boiling ocean around us. We were so close to the lavas edge I thought we would be engulfed. The air was unbelievably thick – a substance filling the empty caverns of your throat. Billows of smoke surround us. I began to count and hold my breath until the smoke dispersed – three seconds to go, now cool air, three seconds, now cool air. I looked down at my chest for a moment, wearing only a tank top against my skin, thick air swirling and too close to the phenomenon. Tiny wisps of invisible down protecting my skin (that throw back to more animal days) were entirely encased in airborne lava mud. Every hair a miniature lava stalactite (a fast time version of the petrified animals of Fontaines Petrifiantes - placed under carbonate waterfalls and slowly encased in limestone, feather, bone and fur buried inside a personal stalactite.) My chest patterned and reptilian like the broken mosaic out in the lava field. Physical Geology.

Each part of the flow like an anatomy lesson, muscle opened, bone revealed, blood and tissue all there, like holding a heart in your hand. How was it possible to lead a normal life in a still world, alongside the knowledge that your neighbor, that dinosaur cousin that no one speaks of – the remote world is right next to you in this continual present.

## **[KAREN]**

*Physical, personal, geological, narrative.*

I call myself an archaeologist with a volcanology fetish. I never feel more alive than when hovering, transfixed, at the lip of a volcano that is new to me, unknown.

But why?

As is common and accepted practice I can of course blame my childhood. A grandmother sent me a glass coffee jar topped with an olive-green plastic lid; it was filled with ash from Mt St Helens. That's partly where it started. The ash combined combustively with new ideas that had already begun to fill my head after my father carelessly left a copy of *The Complete Book of Marvels* (Halliburton 1941) lying about the house. The book was given to him when he was a child in 1942, was by my childhood old, and he erroneously thought it no longer had teeth. I had two favorite chapters in the book, which I read again and again. The first was about Panamá (where Richard Halliburton, intrepid explorer and author of the *Book of Marvels*, famously swam the canal); I grew up and completed my doctoral fieldwork there as a direct result. The second chapter was about Pompeii and the AD 79 eruption of Vesuvius; I fell in love with volcanoes and archaeology. As a child, I dreamt of volcanic tuff filled with

children like myself and my brother. We were enshrined in boulders that spoke of great violence but rested in quiet slumber.

I generated novel and innovative hypotheses, given my early understanding of the law of superposition. When I was 7, I proposed the existence of a buried Italian city below the dirt lane of our Virginia farm. It was clearly evidenced, I argued, by the bricks I found at the bottom of potholes. Time passed. I changed this unpublished theory but remained in love with the volcano and was forced to leave the south, which is notoriously devoid of them. I devoured as many new volcanoes as possible but was never full.

'A volcano is not a mountain like others. Raising a camera to one's face has effects no one can calculate in advance' (Carson 1998: 135).

Love. Volcanoes. Unpredictability. They seem to mesh naturally together. At a particularly bruised part of my life I met a boy. We climbed Hekla together in the very early stages of our courtship. The uncanny eeriness of the purported entry to hell made us leave a note on the windshield of our car, parked at its foot, with our names and nationalities should we not return. After crossing bitterly cold lunar landscapes – up, up, up - we arrived at the top and touched the warmth of the magma-warm summit.

Last summer he and I went to Montserrat, a lovely postcard-perfect Caribbean island [barring the explosiveness of the volcano that sent most of the islanders

and rock stars fleeing].<sup>6</sup> The volcano, at the time, teetered on the brink of a massive explosion that was to come within weeks.

There was sulfur - and perhaps more - in the air because I became engaged to my lover while there.

It is customary in such situations that a man gives a woman a rock. The concept of giving a diamond is intimately volcanic; diamonds are brought to the surface from the mantle in a rare type of magma [kimberlite] and erupted at a rare type of volcanic vent [a diatreme].

My partner is an unusually patient and kind one; I also wanted to give him a rock. I chose a teardrop shaped volcanic stone from the beach. I wrote on it a snippet of sonnet.

*Not marble, nor the gilded monuments  
Of princes, shall outlive this powerful rhyme;  
But you shall shine more bright in these contents  
Than unswept stone besmear'd with sluttish time.  
... You live in this, and dwell in lover's eyes<sup>7</sup>*

We each brought our stones back to NY with us. Sappho, ancient lyric poetess, advised two and a half millennia ago 'do not move stones' (Carson 2002: 293). What that means between ancient and modern wisdoms, I cannot say. Which is more sage? Which is more lasting?

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<sup>6</sup> Montserrat provides the unusual experience, upon landing at the small airport, of greeting each visitor with the phrase 'welcome to the colony'. The American second-home buyers who purchased and built fantasy mansions prior to the 1995 onset of eruption and the 17<sup>th</sup> century British transplant, seeking a more exotic and less charted life in the New World, seem not so different to me.

<sup>7</sup> This is one of Shakespeare's 'Fair Youth' sonnets (#55).



In Hawaii my newlywed husband and I watched the glowing life of Kilauea's lava flowing at the Pu'u O'o spatter cone. Pele supposedly is displeased when anyone takes a part of her away, but after he poked a stick into the oozy warmth to bring out a small dab of her soul, carefully cooled it with water, and presented it to me it would have felt like leaving a child behind on the ropy pillows of hardened lava.

I keep it near to me. It is worth more than diamond.

Last month we stared down into the maw of Vesuvius together. An impossibly old man, spine bent and face gnarled, gave me a small rock as a present as we walked down from the crater.

'Not only the young can give rocks', it nearly audibly says to me.

I keep it with the others, which are beginning to fill our apartment with stony life and whispers of far-away places and long ago time.

Time, incommensurability, ephemerality. A human life span with its loves and passions seems dwarfed when compared to the seeming immortality of stones and the physical planet which outlast us and our words.

The fleeting nature of what we create - of how we image and reference - the physical planet can be overwhelming.

On a whim, I searched the word 'volcano' on Twitter.

Within the split second required to do the search I was informed that an additional 90 volcano tweets occurred since it began. I could only access that

which was already at that point stale and which by this point is a virtual coprolite...<sup>8</sup>

What did people say?

...When someone tells you to sacrifice during a relationship that doesn't mean throw the other person in a *volcano*. [danecook]

what is that noise ?! is it a *volcano* ? is it a hungry lion ?? NO ! its my belly that wants food !!!!!!!!!!!!!!! [PnutButterNinja]

Maybe that's what happens when a tornado meets a *volcano*  
[RonnieP91, rachad6, asnallar – via Eminem's 'Love the way you lie' of course]

Passion Pain Pleasure Tour - where he did the Finger Game.....Damn my *volcano* almost erupted...Fuck! [MochaFlavored]

I'm gonna burst like a *volcano* tho it's my fault. [MeiaWH]

I'm trying not to be tempted...please mini *volcano* cake, don't stare at me... [poshtraveller]

The flutter of twitter thoughts gave a tiny snapshot of the prior moment's volcanic thoughts. The body, the emotions, and passion - infamously unstable and unpredictable things, all - are filled with fire and configured in very personal ways.

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<sup>8</sup> A coprolite is petrified fecal material.

'A healthy volcano is an exercise in the uses of pressure' (Carson 1998: 105).

While the Romantics held the volcano as metaphor for that which we could not touch, that which was out of reach and beyond comprehension, simultaneously it also exists as something that we can literally ingest or that can erupt from somewhere inside of us. Does that mean the Romance is dead? I do not know.

Stones, though, and not the things we make from them, will last. Another sonnet, familiar to many of us, comes to mind from these thoughts:

*I met a traveler from an antique land  
Who said: Two vast and trunkless legs of stone  
Stand in the desert. Near them, on the sand,  
Half-sunk, a shattered visage lies, whose frown  
And wrinkled lip, and sneer of cold command  
Tell that its sculptor well those passions read  
Which yet survive....*

Ozymandius, Percy Bysshe Shelley (1818)

Passion linked to stone survives, Shelley suggests. What then is stone?

*Physical, personal, geological, narrative.*

The first single-celled life, extremophilic, formed 3.5 billion years ago over deep-sea volcanic vents; life and new stone were born in tandem at seemingly magical spots; organic life springing from a non-organic source. The two seem

diametrically opposed; thesis and antithesis with no synthesis in sight. Where does the volcano come from?

It is the same as asking where god comes from; a question too large to truly comprehend. We can only examine what we have at our disposal now to try and understand the deep past. Some of these data indicate that all elements except hydrogen and helium – hence including the carbon, oxygen, and nitrogen critical for life - were manufactured by nuclear reactions in the interiors of stars that produced microscopic dust.

Earth and everything on it – oceans, atmosphere, stones and life – are comprised of the same material. *Everything* we know was once stardust that elected to join the solar system as it formed.<sup>9</sup> We are all stardust, but so is the earth.

The volcano is comprised of stone; it is the creator of new stone. It helped to create us. It is also, at its core, us, and we are it.

*You live in this, and dwell in lover's eyes.*

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<sup>9</sup> Comet Tempel 1 will be the next stardust mission in 2011. Geoffrey Burbidge, who died in 2010, first proposed in 1957 that we are all stardust.

[ILANA]

## THE SECRET LAVA TUBE

We heard it was possible to enter a hidden lava tube. We were able to join an expedition that week. En-route to the lava tube we passed a mobile seismograph unit - a nondescript rectangular box containing monitors to follow movements of the volcano. Boxes were implanted into the slopes at regular intervals, like the heart rate monitor my mother had to wear to following unknown 'flutters' and a faint feeling. Our guide also had a detector hung around his neck – a mechanical canary to pick up sulphur dioxide levels in the subterranean air. We went down a ladder, deep underground. Inside the artery of a volcano.

The volcano is like a body. It pumps lava throughout its system and breathes in and out through the mouth of a crater. A lava tube is like an artery coming out of the ventricle of a volcanic heart. Imagine a tunnel or a very long pipe that happens to be made of cooled magma. Lava travels through the tunnel until it empties out into the ocean. The ceiling melts. Lava stalactites form in a single incinerating moment - like a torrential downpour that comes as quickly as it stops. New arteries form as needed. Layers lie down one upon another. Through this process, new land is formed. When a lava tunnel remains empty, it becomes a lava tube.

Once inside the lava tube, the walls appeared to be covered in the finest silver latticework, moonlit lace clinging to every surface. Invisible until your headlamp made contact with its contours, a mosaic of mica, the moon, opals and hammered metal. In fact, it was a rare type of bacteria that only lives in several cave environments throughout the world. In the search to understand how chemotherapy

could work, these particular bacteria were a critical piece of the puzzle. A most unexpected revelation - to be standing inside of a lava tube on an island 2,500 miles from anywhere else on earth, and realize these organisms - thriving inside a lava tube - had drastically affected my father's quality of life. I want to call him and tell him - I am standing looking at the cure. Time is so inflexible when someone dies.

Inside the cave are other forms of life, insects so small they look like floating dust in a patch of sunlight. Tiny spiders weave horizontal webs that shiver with your breath. At the tip of each lava stalactite is an amber hue, as when in a molten state, metals are heavier than liquid rock and sink to the bottom of each volcanic finger.

When we entered the lava tube we were told we could not touch any part of it except for the rock floor. Even the natural oils from your fingertips would wipe out the entire bacteria colony.

## KILAUEA IKI, TRACES OF THE 1959 ERUPTION

We started our descent to the crater floor. A steep way down through rock cuts and fan branches. A jumble of lava boulders, fissures, precipice, smooth frozen sea undulating waves on pause forever or until the lava comes out of the side of the mountain again. We climbed up to the gaping hole where all this came from. Now filled with millions of tons of small lava bombs, tephra, pumice, scoria, ash fall becoming cement with water, rainforest mixer to embed one rock into a pile of volcanic building blocks.

There is nothing human here, no braided ropes of spun obsidian or constructions of cut basalt columns as elegant as Ionic, or Doric. Just rubble. Heaps at a sliding angle, of geological detritus. If you were to dig into this ash heap, would it open into a lava tube. Scooping out some more, would you reach down back into the magma chamber, below the crust, the plates, down to the core.

## OUT ON THE LAVA

Today we would meet the active flow. Ken, the volcanologist, arrived with three volcanology students. We would visit both plumes and explore the active flow areas. We were instructed to have gloves handy, as new flow was pure, brittle, volcanic glass, and would slice your hand open without fail if you stumbled along the way. The plumes were way in the distance, with fields of lava to cross before we met face to face. We passed the remains of small shacks eaten by the lava flows, corrugated bits of roof and wall left embedded mid flow. The lava was very irregular; surfaces went up and down like broken icebergs in the spring thaw. We passed lava flows, one week, one month, nine months old.

We crossed a river of lava that had only recently stopped gushing. The lava was like burnished brass here. A matte metallurgical sheen. Here all sea creatures, gigantic octopi and squid had snuck into lava skin and lay twisted, tentacles curling up at the tips. Traces of Pele's hair could be found in shallow fissures of rock made only yesterday, or just before. Even with the knowledge it was glass I could not stop myself from reaching out to pick up just one strand. Reminded of Persephone, even three pomegranate seeds were too many; just one glass shard went straight into my fingertip, through my skin, a drop of blood. Pele's tears were at my feet. The sun was strong, very strong and I felt my long sleeves stick to my arms, my back - textile in sweat. We were only a quarter of the way there, and I began to

push the idea of sunstroke very far off and away. There was no time, no space for sickness. Only now to meet the lava. My hat clung to my head. Sunscreen was reapplied as thick as paste.

Ken said to be aware certain surfaces might appear solid, but were air-bubbles formed above the flow. Your foot would drop through the crust - but no more than a few feet at a time. Watch for discolouration, heat pockets that reached you in a wave as you passed over. Generally, seriously, watch your step. But don't worry, it will all be fine. We continued to walk. You develop an underfoot rhythm, glass crunching, eyes fixed on each feature, not only to catch yourself from falling, but more importantly to take in everything, all at once, each last detail. The plume in the far distance came into closer focus - you could now describe it in 'blocks' rather than miles away. The volcanology students would stoop and bend down, taking samples of ash and sulphur.

We were near the plume. The ground was hot. The sound was very strong. Like a steam engine mixed with a shrieking wind tunnel or an amplified tea pot hitting boil, a loud hollow sound, an airplane passing directly overhead, an autumn storm. We situated ourselves in a small dip of the cliff face. One volcanology student sat on a perch and looked out at the lava. The two other students were a couple, two girls, very into each other but all quite new. I tried to imagine what it must be like to be in love for first time, on this volcano. You would feel the lava was doing exactly what you felt. We stayed at the plume for a long time. There was one open lava pool. Shocking crimson, an oval no more than two feet wide. Lava moving as if a normal body of water - like the Hudson, only blood red. The aperture was obscured in stages by our constant companion - the plume. I sat on the ledge. Very rapidly it was too hot to stay in one spot. It reminded me of Harry's winter lava



story - if on a mountain surrounded by snow, but at an active lava front, the best way to warm up is to sit on the edge of the slow moving flow - crust thick and cool enough to support you, liquid warmth to work as the most effective water bottle supplied by the volcano.

The aperture continued to open and close. Lava bombs – cool pitch black on the outside, molten in, would be thrown into the air. It was time to head to the second plume. We walked through a field of Pele's Hair. Every crevice strewn with golden thread. To our left was a frozen waterfall. It was as if a switch had been flipped and time stopped. Cascading falls rushing over an old bench stood still. Gulfoss, Godafoss, every waterfall I had even known, but stuck in perpetual free fall. Like dripping candle wax over the edge of an old shoebox. As Mark Twain said, a truly petrified Niagara.

**[ANDREW]**

## **Lava Hot and Cold: Scotland and Brooklyn**

David Byrne was born underneath a 240ft-high twin peaked volcanic plug called Dumbarton Rock, in the west of Scotland, outside Glasgow. He once wrote that 'People never travel to look at flat landscapes'.

I live and work beneath another volcanic plug, Castle Rock in Edinburgh. Geology has blessed Scotland with so many metaphors of our repressed condition.

As our other national poet, Hugh MacDairmid, wrote:

‘...I study you glout and gloss, but have  
No cadrans to adjust you with, and turn again  
From optik to haptik and like a blind man run  
My fingers over you...’

Here is our deep impulse to visualise extremes, to visit them, these unflat landscapes, ‘these flashing fragments’.

Yet gravity pulls these unflat lava-filled landscapes down to the horizontal – flattening across two dimensions. When a volcano tries to bury itself, it is also trying to flatten itself.

No wonder then that if you press a laptop screen, under your fingers appear moving shapes like geothermal pressure points, viscous like a membrane. A trace memory.

I feel the curiosity, the hungry mind that lies behind the eye that roves out through the lens. Roves its field of view over these flaming fields, in order not to miss a burst, a fall, a flash.

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Anne Carson, again:

'A volcano is not a mountain like others. Raising a camera to one's face has effects  
no one can calculate in advance'.

Indeed, holding a camera is like holding your head in your hands – the cranium held on its support, swiveling, the eye of the camera held in the fingers, levered through the arm, like a feral animal with a perfect memory,  
inhaling the noxious images.

This truly is *footage* – experience measured through the pace of a foot.

The Empedocles Complex is the temptation to become one with nature, to throw yourself into the void, to destroy yourself in order to unite with natural phenomenon. A dangerous feeling when you stand at the crater's rim. But does the Empedocles Complex work through a lens, with our perception drawn like wire through the camera aperture, does it become more tempting to step over the edge into oblivion? To 'just break apart into volcanic particles, becoming part of the extended volcano' is to become pixellated into disaster.

The voice-over caught by the camera microphone: “I just want to reach out and touch it.” But they don’t want to enough, because they didn’t, because their footage has been safely uploaded to YouTube.

You have to face forward to film flowing lava, but before the point at which you or your equipment burns. At what point to turn heels in retreat?

“If I wasn’t filming this, I’d be running for my life.”

Whether we know it or not, and better than Orpheus,  
we have learned the boundary between tourist and victim.

Tourists think like a camera.

Victims think like a mountain.

But artists think like a volcano.

**[ILANA]**

**FIELD NOTES**

Lips and eyes burning a little bit today.

You begin to obliterate through the act of watching lava. Each small part that gets made of new rock breaks off a little part of your body. You have no sense of distance, perception of space. Only walking with one foot in front of another. Flashlight over lava. Rough. No idea where you are, what you are travelling over, just motion over rock. In this sense, it is like caving, but strangely outdoors in an

expansive space, rather than the interior space of subterranean architecture – a floor above the earth’s core. You don’t feel like you will stumble and incinerate in a hidden fissure, but instead just break apart into volcanic particles, becoming part of the extended volcano. Part Empedocles.

[KAREN]: My sleep was slightly more agitated last night. Now it is the closing day of our time here rather than the start, when all the days were still laid out in front. Acid edges set in. The trip home is so epic. How will we ever make it all the way there?

[ANDREW]: And the real truth, I don't want to leave here, I am becoming part of the volcano, so how can I be expected to leave.

[ILANA]: What has passed between us is too physical, too personal. I feel like my arms could fit between the braided channels of lava, that I could spoon into the crushed drapery, in sleep, in the fields.

[End]